

RESEARCH

Aristotle's Explanationist Epistemology of Essence

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Essentialists claim that at least some individuals or kinds have essences. This raises an important but little-discussed question: how do we come to know what the essence of something is? This paper examines Aristotle's answer to this question. One influential interpretation (viz., the Explanationist Interpretation) is carefully expounded, criticized, and then refined. Particular attention is given to what Aristotle says about this issue in *DA* I.1, *APo* II.2, and *APo* II.8. It is argued that the epistemological claim put forward in *DA* I.1 differs from that put forward in *APo* II.2 and II.8, contrary to what has been claimed by Explanationists, and that each of these distinct epistemological claims rests on a distinct non-epistemological thesis about essence. Consequently, an 'Enriched Explanationist Interpretation' is developed which takes into account both of the aforementioned elements in Aristotle's epistemology of essence. The paper concludes by highlighting an insight the preceding exegetical discussion offers to contemporary essentialists seeking to explain how we come to know what something's essence is.

Keywords: essence; epistemology of essence; non-modal essentialism; Aristotle; Posterior Analytics

§1. Introduction

Essentialists claim that at least some individuals or kinds have essences. This raises an important question: how do we come to know what the essence of something is? Unlike the related topic of modal epistemology, the epistemology of essence has received little attention in contemporary philosophy.¹ The question of how we come to know essences is particularly pressing for essentialists who favor a non-modal account of essence, according to which the essence of something does not just consist of all the properties which it necessarily has if it exists.² Even if an answer is found to the modal epistemological question of how we come to know what the necessary properties of something are, the non-modal essentialist faces a further question as to how we distinguish a thing's essential properties from its non-essential but necessary properties.

The primary aim of this paper is historical and exegetical: the goal is to explicate Aristotle's epistemology of essence, i.e., Aristotle's account of how it is that we can come to know what the essence of something is. It is well-known that Aristotle has a non-modal conception of essence. It is less well-known that Aristotle explicitly took up and tried to answer the question of how we come to know what a thing's essence is. Though my primary aim is exegetical and historical, my hope is that, just as contemporary essentialists have found it fruitful to consult Aristotle's work in their efforts to explicate and motivate a non-modal conception of essence, likewise contemporary essentialists who favor a non-modal conception of essence will find the following discussion of Aristotle's epistemology of essence to be fruitful in their efforts to explicate and motivate their own account of how it is that we come to know what a thing's essence is.

This paper does not offer a comprehensive discussion of the various interpretations of Aristotle's epistemology of essence which can be found in the literature, nor a discussion of all of the many texts which

¹ Contemporary discussion of the epistemology of essence can be found in Oderberg 2007: ch.3; Lowe 2008a, 2008b, 2012; Hale 2013: ch.11; and Tahko 2017, 2018.

² For a classic discussion of the difference between a modal account of essence and a non-modal account of essence, see Fine 1994.

bear on the issue. Instead, my aim is to refine one of three main interpretations of Aristotle's views on this issue, viz., what I call the 'Explanationist Interpretation.'³

In what follows, I begin by reviewing the core claims of the Explanationist Interpretation. This interpretation's core epistemological claim is that we can come to know what a kind's essence is by identifying what feature(s) of the kind explain why it has certain other necessary but non-essential features (viz., what Aristotle calls the kind's 'in itself accidents' (*kath' hautō sumbebēkota*)). This epistemological claim rests on a non-epistemological thesis at the heart of Aristotle's non-modal account of essence, viz., the idea that the essential feature(s) of a kind differ from its necessary but non-essential features in that the former are those which ultimately explain why the kind has the *in itself accidents* that it does (§2). After discussing these core claims of the Explanationist View in detail, I consider two important pieces of evidence which Explanationists often cite in support of their interpretation: (1) a certain methodological passage in *DA* I.1 and (2) the discussions in *APo* II.2 and II.8 of how we come to know essences. I argue that while the *DA* I.1 passage provides strong support for the aforementioned core epistemological claim of the Explanationist Interpretation, the discussions in *APo* II.2 and *APo* II.8 do not. In the latter texts, Aristotle offers an epistemological thesis which differs from the idea proposed in *DA* I.1. Moreover, this distinct epistemological claim rests on a second, non-epistemological claim about essence, a claim which differs from the non-epistemological thesis about essence which underlies the epistemological claim in *DA* I.1 (§3). Having argued that there are these two distinct elements in Aristotle's theory and epistemology of essence, I go on to offer an account of how these two elements fit together, proposing what I call an 'Enriched Explanationist Interpretation' of Aristotle's epistemology of essence (§4). Finally, I conclude by highlighting one way in which my discussion is relevant to the contemporary essentialist's task of explaining how it is that we come to know what a thing's essence is (§5).

§2. The Explanationist Interpretation of Aristotle's Epistemology of Essence

Before proceeding, it is necessary to note that the essentialism discussed in this paper concerns the essences of *kinds* rather than those of individuals. To use an Aristotelian phrase, the concern is with *what it is for something to be* an instance of a kind *K* (*to ti ēn einai tō(i) K*). The claim that kinds have essences can be distinguished both from the claim that individuals have essential properties (or are essentially members of certain kinds) and the claim that individuals have individual essences (i.e., what are sometimes called 'haecceities').⁴ Whatever his views concerning the essences of individuals, it is agreed that Aristotle thinks that kinds (e.g., human being, triangle, eclipse, thunder, etc.) have essences.⁵ Hence, this paper focuses on Aristotle's claims about the essences of kinds and how it is that we can come to know what the essence of a kind is.

This leads to a second point of clarification concerning my talk of the 'features of a kind.' By the 'features of a kind,' I mean to refer to the features which belong to all instances of the kind. Thus, for example, the property of having interior angles equal to two right angles is a feature of the kind triangle: all triangles have interior angles equal to two right angles. Likewise, when I speak of the 'necessary features of a kind,' I mean the features which are such that, necessarily, something has that feature if it is an instance of the kind. Finally, I note that I use 'feature' in a broad sense according to which the form, matter, parts, and properties of something can all be called 'features' of it; relatedly, I use the terms 'belong to' and 'have' in a broad sense according to which any feature of a thing can be said to 'belong to' it or be 'had' by it.

Having made these clarifications, let us turn now to the question of how it is that we come to know what a kind's essence is. Though discussion of Aristotle's epistemology of essence has not been without controversy, one important point of agreement is that Aristotle holds that, in typical cases, some prior knowledge (*gnōsis*) of a kind is required for one to come to know what its essence is. On Aristotle's view, our knowledge begins with knowledge (*gnōsis*) acquired through perception. Perceptual episodes are retained in memory, and over time the accumulation of such memories eventually gives rise to a kind of knowledge which Aristotle calls

³ The name 'Explanationist Interpretation' derives from Bronstein (2016: ch.8). Versions of the Explanationist Interpretation are defended by Kosman (1973), Bolton (1987, 1991, 2017), Lennox (1987, 2001: 161–162), McKirahan (1992), Charles (2000, 2010, 2014), and Bolton and Code (2012). The other two interpretations I have in mind are the Intuitionist Interpretation (defended by Ross (1949), Irwin (1988), and Frede (1996)) and the Socratic Interpretation (defended by Bronstein (2016)). Bronstein (2016: ch.8) discusses all three interpretations and argues for the superiority of the Socratic Interpretation. In 'Aristotle's Epistemology of Essence' (manuscript), I discuss all three interpretations and argue for the superiority of the Explanationist Interpretation.

⁴ For some evidence that Aristotle thinks individuals have essences, see *Metaph.* V.18 1022a24–28 (where Aristotle speaks of the 'essence of Callias') and *Metaph.* VII.4 1029b14–16 (where Aristotle speaks of 'your essence').

⁵ See *APo* I.8, I.24, and I.31. For further discussion, see Bronstein 2016: 81–82.

'experience' (*empeiria*).⁶ Aristotle characterizes one who has *experience* (*empeiria*) as knowing that something is the case (*to hoti*), (e.g., that the moon undergoes a certain kind of loss of light, which we call 'an eclipse') or whether a certain kind exists (*ei estin*) (e.g., whether there are human beings).⁷ A person who *merely* has experience does not yet know 'the why' (*to dioti, to dia ti*) of the facts known by experience and does not yet know what are the essences of the kinds of whose existence she is aware. Thus, for example, the person who has mere experience may know that the moon undergoes a certain kind of loss of light known as an 'eclipse' but not know why it does; that some individuals are human beings but not what makes them human beings; that there are eclipses but not what the essence of an eclipse is; or that there are human beings but not what the essence of a human being is.⁸

There are many interesting issues here, but, for our purposes, the key point is that Aristotle holds that some prior knowledge of a kind (knowledge included in or at least derived from one's accumulated experience (*empeiria*) involving that kind) is typically needed for one to acquire knowledge of its essence.⁹ Hence, we can reformulate our question in the following way: once we acquire through experience (*empeiria*) sufficient knowledge concerning a kind (e.g., knowledge that there is such a kind and that its instances have such and such features), how do we then come to know what its essence is?

According to the Explanationist Interpretation, Aristotle's answer is that we can come to know what the essence of a kind is by identifying the feature(s) of the kind which explain why all instances of the kind have the other, non-essential but *in itself* (*kath' hautō*) features which they are known by experience (*empeiria*) to have. The view is usefully broken down into two claims. The first claim is that our initial, experience-based knowledge of a kind includes knowledge that the instances of the kind have certain features, at least some of which belong to the kind *in itself* (*kath' hautō*) and are explicable by reference to more basic features of the kind. The second claim is that we come to know the essence of a kind by identifying why the kind, i.e., all of the instances of the kind, have the explicable features which we initially know them to have. For, of the features which belong by necessity to instances of the kind, the essential one(s) are those such that (a) they do not belong to the instances of the kind in virtue of other features of the kind belonging to those instances and (b) at least some of the other necessary features of the kind belong to its instances (at least in part) because the essential feature(s) belong to those instances.¹⁰

This interpretation of Aristotle's epistemology of essence operates against a background interpretation of Aristotle's non-modal account of essence. Aristotle explicitly denies that all of the necessary features of a kind are included in its essence. In particular, Aristotle is quite clear that a kind's *in itself accidents* (*kath' hauta sumbebēkota*) are not part of its essence, even though such accidents are necessary features of it. For example, Aristotle says that the property of having interior angles equal to two right angles is an *in itself accident* of triangles; necessarily, anything which is a triangle has interior angles equal to two right angles, but this property is not part of the essence of a *triangle*.¹¹ In other words, Aristotle has a non-modal account of essence: not all of the necessary features of a kind are part of its essence. But if not all of a kind's necessary

⁶ See *APo* II.19 100a3–9; *Metaph.* A.1 98027–982a2; and *APo* I.18. See also *DA* III.8 432a7–8.

⁷ Throughout the paper, in keeping with Aristotle's usage, when I speak of 'an eclipse' or 'eclipses,' I mean to refer just to *lunar* eclipses.

⁸ See *APr* I.30 46a17–27, *APo* I.13 78b34–79a6, *APo* II.2, *APo* II.8, and *Metaph.* A.1 981b9–13. See also *EN* I.4 1095b6–8.

⁹ There is a debate about how to understand the content of *empeiria* and in particular whether 'the whole universal' mentioned at *APo* II.19 100a3–9 is part of the content of *empeiria* or is a reference to a stage of knowledge intermediate between *empeiria* and knowledge of essences. This debate need not detain us here. For discussion of this issue, see Bronstein 2012 and Hasper and Yuridin 2014.

¹⁰ A kind's essential feature(s) need not be among those the inquirer initially knows (by experience) to belong to the kind. Indeed, Aristotle claims that what is 'better known to us', i.e., what is initially known by us, is typically not what is prior by nature (see *APo* I.2 71b33–32a5; *Top.* 101a36–b4, 141b3–14; *Phys.* I.1 184a16ff; *Metaph.* VII 1029b3–12; and *EN* 1098a33–b4, 1139b28–31, 1151a16–18). In addition to looking for explanatory connections among the attributes one initially knows to characterize a kind, one can also hypothesize that the kind has certain additional feature(s), beyond those already known to characterize it, which would explain why it has the attributes it is already known to have. Thus, for example, in the eclipse example discussed in *APo* II.8, one initially knows by experience that there are eclipses and that an eclipse is a certain kind of loss of light from the moon. At this stage, one does not know that an eclipse is due to the interposition of the Earth between the moon and the sun (the moon's light source). But in the course of seeking to explain why eclipses occur, one hypothesizes that an eclipse is due to the interposition of the Earth between the moon and the sun. The hypothesis that eclipses are caused in this way could be justified not by perceptual experience (as in the fanciful case imagined in *APo* II.2 90a26–30, where a person standing on the moon *sees* the interposition occur) but by the fact that eclipses being caused in this way would explain why eclipses have certain other features, e.g., why they always involve a circular black spot which gradually overtakes the whole surface of the moon.

¹¹ For Aristotle's discussion of *in itself accidents*, see *Metaph.* V.30 1025a30–34; *APo.* I.7 75b1; *APo* I.9 76a4–9; *APo* I.10 76b6–7, b13–15; and *APo* I.22 83b19–20.

features are included in its essence, then what distinguishes a kind's essential feature(s) from its necessary but non-essential features (other than the fact that the former are essential and the latter are not)?

According to one influential line of interpretation, Aristotle holds that a kind's essential features can be distinguished from its merely necessary features by virtue of their *explanatory role*.¹² Put loosely, the idea is that the essential features of a kind are its explanatorily basic necessary features. More precisely, the claim is that the essence E of a kind is not only a necessary feature of the kind but also such that (a) E does not belong to any instance of the kind in virtue of other features of the kind belonging to that instance and (b) at least some of the other necessary features of the kind (viz., its *in itself accidents*) belong to its instances (at least in part) because E belongs to those instances. Thus, for example, if it is essential to being a triangle to be a three-sided closed plane figure, it follows that (a) there are no other features had by all triangles such that something is a three-sided closed plane figure because it has those features and (b) at least some of the other necessary features of triangles (e.g., the property of having interior angles equal to two right angles) belong to things which are triangles because these things are three-sided closed plane figures.

This picture of essence falls out of Aristotle's theory of science (*epistēmē*) and in particular his idea that *definitions* (*horismoi*) are among the principles of a science. A science, on Aristotle's view, encompasses two kinds of facts: indemonstrable *principles* (*archai*) and the facts which are demonstrable from (i.e., explained by) the principles. The principles of a science are not explained by reference to other facts but instead are the fundamental, unexplained starting-points of the science by reference to which the other facts in the domain of that science can be explained. Aristotle identifies two kinds of principles: *theses* and *axioms*. The former group of principles are *proper* (*oikeia*) to the science in question, i.e., they are not used as principles in the demonstrations of other sciences, whereas the latter principles (e.g., the principle of non-contradiction) are *common* (*koina*) in the sense of being used in several sciences (if only by analogy – see 76a38–40).¹³ According to Aristotle, the proper principles of a science include *definitions* (*horismoi*), where a definition is defined as an account of the definiendum's essence (*ti esti*).¹⁴ Since a definition predicates a kind's essence of that kind and is indemonstrable, it follows that the fact that a kind's essence belongs to it is indemonstrable; in other words, there is no further fact which explains why it is the case that all instances of the kind have the features which make up the kind's essence. For example, if a triangle is essentially a three-sided closed plane figure, then there is no demonstration of the fact that anything which is a triangle is a three-sided closed plane figure; this fact does not obtain in virtue of any other facts but rather represents a basic or fundamental truth about triangles.

The classification of definitions as principles implies not only that essential truths do not hold in virtue of other truths but also that such truths are explanatory of other, demonstrable facts. In particular, Aristotle's discussion of *in itself accidents* (*kath' hauta sumbebēkota*) implies that at least some of a kind's necessary but non-essential features, viz., those which Aristotle calls '*in itself accidents*,' are explained by reference to the kind's essence.¹⁵ More precisely, the claim is that certain features (viz., the *in itself accidents* of the kind) necessarily belong to any instance of that kind because such features follow upon its essence, belonging to something because the kind's essence belongs to it. Thus, for example, necessarily, human beings are capable of finding things funny (an *in itself accident* of human beings) because, necessarily, anything which is a human being has a rational soul (the essence, or part of the essence, of a human being) and the capacity to find things funny is a capacity which follows from and is explained by something's having a rational soul.

This non-epistemological thesis about the explanatory role of essences opens the way for an explanation-based epistemology of essence according to which we can identify what the essence of a kind is by identifying what its explanatorily basic feature(s) are, i.e., which feature(s) of the kind are such that they (a) do not

¹² See Barnes 2002/1993: 120; Bolton 1987: 145; Bronstein 2015; Bronstein 2016: 49, 57, and 106; Charles 2000: 202–203; Charles 2010: 291 and 295–6; Charles 2014: 20; Goldin 1996: 76; Irwin 1980: 38–39; Irwin 1988: 21 and 124; Kung 1977: 369; Lennox 2001: 161–2; Loux 1991: 73; Malink 2013: 125–6; Shields 2014: 122; and Williams & Charles 2013: 121 and 140.

¹³ Aristotle discusses the different types of principles in *APo* I.2 and I.10.

¹⁴ See *APo* I.2 72a21–24. For the general idea that a definition is an account of its definiendum's essence, see *Top.* I.5 101b38; *Top.* VII.5 154a31–2; *Metaph.* VII.6 1031a12; *Metaph.* VII.5 1031a11–12; *Metaph.* VII.4 1030a6–7, 1030b5–7; and *Metaph.* VIII.1 1042a17–21.

¹⁵ See *Metaph.* V.30 1025a30–34; *APo.* I.7 75b1; *APo.* I.9 76a4–9; *APo.* I.10 76b6–7, b13–15; and *APo.* I.22 83b19–20. See also *PA* I.1 640a32–35, *DA* I.1. 402b16–403a2, *Phys.* II.7 198a16–18, and *Metaph.* XIII.4 1078b24–25. It is widely agreed that the *in itself accidents* of a kind belong to it in virtue of its essence belonging to it (see Bronstein 2016: 47; Charles 2000: 202–3; Irwin 1988: 124; Lennox 2001: 161–2; Malink 2013: 125–6; Ross 1949: 577; and Alexander of Aphrodisias, *In Top.* 50.6–51.5). Some commentators make the stronger claim that Aristotle holds that *all* of a kind's non-essential, necessary features belong to it in virtue of its essence belonging to it (see Bronstein 2016: 114 and Koslicki 2012: 202). However, it's not clear that there is any textual evidence for this stronger interpretation.

belong to any instance of the kind in virtue of other features of the kind belonging to that instance and (b) can be used to explain why, necessarily, any instance of the kind has the other, *in itself* but non-essential features of that kind. Indeed, this is the view which the Explanationist Interpretation attributes to Aristotle.

§3. Two Distinct Pairs of Epistemological and Non-Epistemological Theses about Essence

A variety of methodological passages found throughout Aristotle's corpus have been invoked to support the Explanationist Interpretation. I do not offer an exhaustive discussion of these passages here.¹⁶ Instead, I focus on two pieces of textual evidence which have been central to the Explanationists' case for their interpretation, viz., (1) a well-known methodological passage in *DA* I.1 and (2) the discussions of how essences come to be known in *APo* II.2 and II.8. In what follows, I argue that while the *DA* I.1 passage provides strong support for the Explanationist's claim that Aristotle thinks we can come to know a kind's essence by discovering what feature(s) of it explain why it has the *in itself accidents* that it does, the discussions of *APo* II.2 and II.8 do not. In *APo* II.2 and II.8, Aristotle does not make the same epistemological claim that he does in the *DA* I.1 passage but instead introduces a distinct epistemological claim, a thesis which rests not on the idea that the essence of a kind is explanatory of its *in itself accidents* but rather on the distinct idea that the essence of a kind includes 'its cause.'

Let's start with the passage from *DA* I.1. In this opening, methodological chapter of Aristotle's treatise on the soul, Aristotle observes that a central aim of the science of the soul is to make clear the essence of the soul (402a7). He then raises a general question about how one is to ascertain what the essence of something is (see 402a10ff) and, later, gives at least a partial answer to this question when he remarks,

(a) It seems that not only is knowing the essence useful for discerning the causes of the [in itself] accidents of substances... (b) but also knowing the [in itself] accidents [of something] contributes in great part (*sumballetai mega meros*) to knowing [its] essence (*pros to eidenai to ti estin*). (c) For whenever we are able to give an account in conformity to what is apparent concerning all or most of its [in itself] accidents, at that time we will be able to speak best about the essence (*ousia*). For in every demonstration [concerning a given kind] the essence (*to ti esti*) [of that kind] is a principle (*archē*). (d) Hence, whichever definitions are not such that [our] knowing (*gnōrizein*) the [in itself] accidents (*ta sumbebēkota*) follows [from our knowing the definitions] but instead do not even make it easy [for us] to form a plausible conjecture about these [i.e., its in itself accidents], it's clear that all [these definitions] are stated in a dialectical and empty manner. (402b16–18, 402b21–403a2, my translation).¹⁷

In (a), Aristotle makes the point that knowing something's essence can be useful for explaining why it has the *in itself accidents* that it does, a point which recalls the idea that the essence of a kind is explanatory of why it has the *in itself accidents* that it does. He then goes on in (b) to make the point which is more crucial for his purposes and ours, viz., that knowing (by experience, as 'in conformity to what is apparent' suggests) the *in itself accidents* of a kind can play a crucial role in our discovering what its essence is. In (c), he explains *how* this prior knowledge helps us discover what the kind's essence is: we know a kind's essence 'best' when we know what accounts for or explains why it has the *in itself accidents* that it does. This suggests that Aristotle thinks we ought to use our knowledge of a kind's *in itself accidents* to guide us in our search for its essence, for the essence should explain why it has these accidents. Indeed, in (d) Aristotle condemns as 'dialectical and empty' (rather than genuinely scientific) definitions which cannot account for their definienda's *in itself accidents*. This underscores the point that our theorizing about the essence of a kind must be guided by the need for that essence to explain why the kind has the *in itself accidents* it is known to have. In fact, later on in *DA* I.4, Aristotle criticizes his predecessors' definitions of soul on precisely this basis (see 409b12–18).

Overall, this passage provides strong evidence for the Explanationist Interpretation. Here Aristotle clearly has in view his idea, explicated at length in §2 above, that the essence of a kind is explanatory of why it has the *in itself accidents* that it does. Moreover, here Aristotle explicitly connects this claim about the explanatory role of essences with a claim about how it is that we can come to know what a kind's essence is. In

¹⁶ Such passages include *APr*. I.30 46a17–27; *APo* I.13 78b34–79a6; *HA* I.6 491a7–14; and *DC* III.7 306a13–17. For discussion of why these texts support the Explanationist Interpretation, see the Explanationist references in n.3.

¹⁷ My translations in this article are based on the Greek texts found in Ross 1956 and Ross 1964.

particular, the claim in **(c)**, viz., that we are in the best position to identify a kind's essence when we can explain why it has the *in itself accidents* that it does, fits well with the Explanationist's claim that we can identify a kind's essence by identifying the feature(s) of it which ultimately explain why it has the *in itself accidents* it is known (by experience) to have. Moreover, the claim in **(d)**, viz., that a definition is 'dialectical and empty' if it fails to identify as the essence of a kind something which can explain why the instances of the kind have the *in itself accidents* that they do, not only reinforces this point but draws attention to a way of testing a definition for adequacy: the definition is adequate only if the essence specified by it can do the job of explaining why the definiendum has the *in itself accidents* that it does. Indeed, this is a natural epistemological test for Aristotle to recommend, given Aristotle's non-epistemological idea that it is part of the explanatory role of a kind's essence that it explain why the kind has certain further, non-essential features by necessity. Hence, I conclude, in line with other Explanationists, that this passage provides strong support for the Explanationist Interpretation.¹⁸

But what of Aristotle's discussion in *APo* II.2 and II.8? In *APo* II.8, Aristotle, building on ideas put forward in *APo* II.2, attempts to explain, in the case of kinds which have 'causes other than themselves' (see 93a5–6, 93b18–19, and 93b21–28; see also 88a5–8), '...how the essence (*to ti esti*) is grasped (*lambanetai*) and comes to be known (*gignetai gnōrimon*)' (93b15–16). Later, I'll return to the issue of just what distinction Aristotle has in mind in restricting his attention to kinds which have 'causes other than themselves.' For now, I focus on the key claim of the chapter, which is that, for such kinds, though 'it [i.e., the kind's essence] is not deduced or demonstrated, nonetheless it is made clear through deduction and demonstration (*dēlon mentoi dia sullogismou kai di' apodeikseōs*)' (93b17–18).

Through a demonstration of what? Given the discussion of *DA* I.1, one might expect the answer to be 'through a demonstration of the kind's *in itself accidents*,' i.e., by explaining why the kind has the *in itself accidents* that it does. Indeed, several proponents of the Explanationist Interpretation have suggested just this. These authors argue that in *APo* II.8 Aristotle outlines a procedure in which one starts with an initial account of a kind which defines it by reference to one or more of its explicable, *in itself* features. Using this initial account, one proceeds to make clear the essence of the kind by identifying other features of the kind which explain why it has the explicable features specified in the initial account. The process can then be repeated until one reaches what one takes to be the explanatorily basic feature(s) of the kind, feature(s) which are such that their belonging to the kind is not explained by any prior, more basic features of the kind.¹⁹

But, as I will now argue, this reading mischaracterizes what Aristotle is up to in these chapters. The key epistemological claim of these chapters is not the idea, put forward in *DA* I.1, that we can come to know what a kind's essence is by explaining why it has the other, non-essential features that it does. Instead, the key epistemological claim of these chapters is that, in the case of kinds which have 'causes other than themselves,' we can make clear what a kind's essence is by making clear the kind's cause. Moreover, the key non-epistemological claim about essence in these chapters is not that the essence of a kind explains why it has the *in itself accidents* that it does; rather, it is the claim that, in the case of a kind which has 'a cause other than itself,' the kind's cause is included in its essence.

To see this, consider more closely what Aristotle says in *APo* II.2 and II.8. In *APo* II.2, Aristotle claims that to seek something's essence is to seek its cause (*aition*) (see 90a1 with 90a5–6) and that 'to know what something's essence is is the same as to know why it exists (*to ti estin eidenai tauto esti kai dia ti estin*)'

¹⁸ Explanationists who appeal to this passage to support their interpretations include Bolton (1987: 133 n.27) and Charles (2010: 302, 2014: 30). Hicks (1907: 191), Johansen (2012: 10), and Shields (2016: 94) offer similar, Explanationist-friendly accounts of this passage, though their focus is on the role this passage plays in *DA* and not on its implications for Aristotle's epistemology of essence in general. I note that Bronstein (2016: 120–123) argues that this passage need not be taken to support the Explanationist Interpretation over his own 'Socratic Interpretation.' For a discussion of why Bronstein's argument fails, see my 'Aristotle's Epistemology of Essence' (manuscript).

¹⁹ Consider, for example, Bolton's summary of what he takes to be the main claim of *APo* II.8–10: '(1) We normally begin with a definition or account of the kind which is our object of inquiry which exhibits the features or manifestations of it which are perceptually most accessible. Typically, such features are not fundamental features of the kind in terms of which others can be explained, but rather explicable by reference to the more fundamental ones and, thus, features which figure in 'conclusions of demonstrations'. (2) Inquiry proceeds by moving from an understanding of something based on a definition of this sort to an understanding where we have an account or definition which exhibits why the thing has the characteristics which figure in the former type of definition. (3) We continue our inquiry to determine whether there is yet a further account or definition which explains the features already used to explain the features initially grasped, and so on, until we have a definition based on the features or features most basic from the point of view of explanation' (Bolton 1987: 145–146). For similar claims, see Charles 2000: 202–203 with 195 and 216; Lennox 2001: 161–2; and McKirahan 1992: 268.

(90a31–32). In *APo* II.8, Aristotle fills out this picture by making clear what kind of knowledge is required for one to be in a position to seek the essence and cause of a kind. In particular, Aristotle claims that we are in a position to inquire (*zēteîn*) about a kind's essence only when we know *in a non-accidental way* that the kind exists (see 93a21–29). Knowing in a non-accidental way that the kind exists requires that we

grasp something of the thing itself, e.g., of thunder, that there exists a certain kind of noise in the clouds; of an eclipse, that there exists a certain kind of loss of light; of a human being, that there exists a certain kind of animal; and of a soul, that there exists something which moves itself. (93a21–24, my translation).

In other words, to be in a position to seek the essence of a kind, one must have encountered some instances of the kind and have a grasp of some of its *in itself* (*kath' hautō*) features ('something of the thing itself'), on the basis of which one can offer a preliminary account of the kind, e.g., thunder is a certain kind of noise in the clouds, an eclipse is a certain kind of loss of light from the moon, etc.

Crucially, Aristotle does not go on to claim, as one might expect given the discussion in *DA* I.1, that one can make clear the essence of the kind by identifying the reason why the kind has the features initially known to characterize it. Instead, he claims that we can make clear the essence of the kind by identifying the cause of the occurrence of the kind so characterized. Thus, for example, Aristotle's claim is not that we can come to know what the essence of thunder is by explaining why thunder has the feature of being a (certain kind of) noise (*pace* Lennox (2001: 162) and Charles (2000: 214)) or that we can come to know what the essence of an eclipse is by explaining why an eclipse has the feature of occurring to the moon (*pace* Charles (2000: 246)). Instead, Aristotle's claim is that we can make clear what kind of noise thunder is, i.e., the essence of thunder, by making clear why the clouds produce that kind of noise (i.e., the kind of noise which is thunder) (see 93b7–14, 93b39–94a5). Similarly, in the eclipse example, Aristotle's claim is that we can make clear what kind of loss of light an eclipse is, i.e., the essence of an eclipse, by identifying why the moon undergoes that kind of loss of light (i.e., the kind of loss of light which is an eclipse) (see 93a29–32, 90a14–18; cf. 87b39–88a2).²⁰

But what about the example in which Aristotle suggests that one can make clear the essence of an eclipse by identifying the cause of the moon's failure to cast shadows when there is nothing between the moon and the Earth (see *APo* II.8 93a37–b7)? I concede that it is an *in itself accident* of an eclipse that an eclipse involves the moon's not casting shadows even when there is nothing between it and the Earth. Still, Aristotle does not say in *APo* II.8 that we can make clear the essence of an eclipse by explaining *why an eclipse* has this feature (as one might expect given what he says in *DA* I.1). Instead, Aristotle says that we can make clear the essence of an eclipse by explaining why the moon fails to cast shadows even when there is nothing between the moon and the Earth. In other words, though the *in itself accident* helps characterize the kind of loss of light which an eclipse is, Aristotle never suggests in *APo* II.8 that the target *explanandum* is why an eclipse (the kind whose essence we are trying to make clear) has the *in itself accidents* that it does. Instead, Aristotle's claim is that we can make clear the essence of a kind by identifying the kind's cause. The point of this 'failure to cast shadows' case is that, in looking for the kind's cause, we may start with an initial account of the kind which characterizes it in terms of one of its *in itself accidents* and seek to identify the cause of the kind by identifying the cause of something characterized in terms of those accidents. In short, though knowledge of a kind's *in itself accidents* has a role to play in the epistemological story described in these chapters, the role that this knowledge plays differs from the role that it plays in the epistemological story of *DA* I.1.

The epistemological thesis of *APo* II.2 and II.8, viz., that we can make clear or come to know what a kind's essence is by identifying the kind's cause, is backed by a non-epistemological thesis about essence introduced in *APo* II.2 and clarified in *APo* II.8. The non-epistemological thesis is that, in the case of a kind which has 'a cause other than itself,' the kind's cause is included in its essence.²¹ Thus, for example, the cause of

²⁰ Bronstein makes a similar point (though without noting that other authors have mistakenly suggested otherwise): 'Thunder just is a noise in the clouds; there is no reason why it is. The question of scientific interest is why is there thunder (i.e., a certain type of noise) in the clouds?' (2016: 140). Charles seems to recognize this when he notes that what is explained in *APo* II.8 is not why *Noise in the clouds belongs to Thunder* but why *Such and Such Kind of Noise (i.e., Thunder) belongs to the Clouds* (see Charles 2000: 198–199), but he then goes on to (mistakenly) suggest that part of what is explained is 'why it [i.e., thunder] is noisy' (202) and 'why thunder has the other genuine (or *per se*) features it has' among which he includes 'being a noise' (214). Lennox (2001: 162) makes a similar error.

²¹ Sometimes Aristotle says that the kind's cause *is* its essence rather than that the kind's essence includes its cause (see 90a15). For example, Aristotle says at 93b7 that the essence of an eclipse is 'an obstruction by the Earth' and at 93b8 that the essence of

an eclipse is included in the essence of an eclipse: an eclipse is essentially a loss of light from the moon due to the obstruction of the Earth; it is part of the essence of an eclipse that it is (efficiently) caused by the obstruction of the Earth (see 90a14–18). Likewise, the cause of thunder is included in the essence of thunder: thunder is essentially a noise due to the quenching of fire in clouds; it is part of the essence of thunder that it is (efficiently) caused by the quenching of fire in clouds (see 93b39–94a5). This non-epistemological thesis about the essences of kinds which have 'causes other than themselves' is what paves the way for the aforementioned epistemological thesis. If we know that the essence of a kind includes its cause, it follows that if we do not already know the kind's cause, we can advance our knowledge of the kind's essence by identifying the kind's cause and then including the identified cause in our account of the kind's essence.

With these points in place, let us now return to an issue put off earlier, namely, the question of just what kinds Aristotle has in mind when he refers to kinds which have 'causes other than themselves.' David Bronstein argues that Aristotle has in mind 'attribute-kinds', i.e., kinds whose instances inhere in or belong to other things: 'Eclipse, thunder, leaf-shedding, and 2R are all states or conditions or affections – in general, attributes – that inhere in or belong to their respective subjects because of some cause' (2016: 99–100). Bronstein contrasts these attribute-kinds with what he calls 'subject-kinds':

Aristotle distinguishes two main types of definable entity and two types of essence by which they are respectively defined. The first type of definable entity is what I call a 'subject-kind' (e.g., line, triangle, animal, human being). These are natural kinds (species and genera) whose individual members are primary substances (e.g., Socrates) or substance-like entities (e.g., this particular triangle)...The second type of definable entity is a demonstrable attribute of a subject-kind. (2016: 45–46).

On Bronstein's view, 'all and only subject-kinds have causes that are the same and all and only demonstrable attributes have causes that are different' (2016: 135). Hence, on Bronstein's view, Aristotle's epistemological claim in *APo* II.2 and II.8 (i.e., the claim that, in the case of a kind which has a 'cause other than itself,' we can make clear or come to know what the kind's essence is by identifying the kind's cause) concerns attribute-kinds only (see 2016: 135–137).²²

But Aristotle's remarks in *APo* II.9 undermine Bronstein's claims. In *APo* II.9, Aristotle contrasts kinds which have 'causes other than themselves' with those kinds which are 'immediates and principles (*amesa kai archai*), concerning which one must hypothesize or make clear in some other way both what it is [i.e., its essence] and that it is (just as the arithmetician does, for she hypothesizes both what a unit is [i.e., its essence] and that there are units)' (93b22–25, my translation).²³ Here Aristotle alludes to a distinction drawn in *APo* I between (a) kinds which are such that one must 'hypothesize' (*hupothesthai*) or 'assume' (*lambanein*) that they are and (b) kinds which are such that their existence is demonstrable.²⁴ But this distinction is not equivalent to a distinction between attribute-kinds and subject-kinds, for there are subject-kinds among the kinds whose existence is demonstrable. Thus, for example, in *APo* I.10 Aristotle writes,

I call 'principles' in relation to each kind those [things] of which it is not possible to prove that it is. On the one hand, what the primaries and what the things composed of them (*ta prōta kai ta ek toutōn*) signify [i.e., the definitions, or accounts of the essences, of the primaries and the things

thunder is 'a quenching of fire in a cloud.' But though Aristotle sometimes speaks this way, his more careful way of putting his view is that the essence of a kind includes its cause. Thus, for example, elsewhere he says not that thunder is essentially a quenching of fire in clouds but rather that thunder is essentially a noise due to the quenching of fire in clouds (see 93b39–94a5). Likewise, elsewhere he says not that an eclipse is essentially an obstruction by the Earth but rather that an eclipse is essentially a loss of light from the moon due to the obstruction of the Earth (see 90a14–18). For further discussion of this issue, see Charles 2010: 288 n.4 and Charles 2014: 17 n.29.

²² Goldin (1996: 126–136) and Ross (1949: 633) defend similar views.

²³ The Greek here is difficult to construe and has been understood in different ways by different commentators. I follow Bronstein (2016: 137, n.14) and Charles (2000: 274–5, n.2) in thinking that Aristotle is referring to *entities* with essences, not 'cases of what a thing is' (see Bolton 1987: 142), when he refers to 'the immediates and principles, concerning which one must hypothesize or make clear in some other way both what it is [i.e., its essence] and that it is (just as the arithmetician does, for she hypothesizes both what a unit is [i.e., its essence] and that there are units)' (93b22–25, my translation). Indeed, Aristotle's example, *a unit*, is an example of an entity whose existence and essence is hypothesized, not an example of a 'case of what a thing is.' More generally, it doesn't make sense for Aristotle to say that, in some cases, one must hypothesize the 'what it is' (i.e., the essence) of a 'case of what a thing is,' for a 'case of what a thing is' doesn't have a 'what it is' (i.e., an essence).

²⁴ In addition to *APo* I.10 76a31–36 (cited in the main text above), see *APo* I.10 76b3–11, *APo* I.2 72a14–24, *APo* I.1 71a11–17, and *APo* II.7 92b12–16.

composed of them] is assumed. On other hand, *that it is* must be assumed for the principles but proved for the rest. For example, we must assume what a unit is [i.e., the essence of a unit] or what the straight is [i.e., the essence of the straight] and what a triangle is [i.e., the essence of a triangle]; and while [we must assume] that the unit and magnitude exist, we must prove the existence of the other things [e.g., triangle]. (76a31–36, my translation).

Notice that here the subject-kind *triangle* is included among those which are such that their existence is demonstrable. Indeed, Bronstein himself concedes this: 'The distinction between unit and triangle is clear. Unit is a primary whose existence is indemonstrable and assumed as a principle (a hypothesis) in the relevant science (arithmetic). Triangle, on the other hand, is a non-primary whose existence is demonstrated in the relevant science' (2016: 172). Again, in *APo* II.7, Aristotle writes, '[T]he geometer assumes what triangle signifies [i.e., what the essence of a triangle is] but proves [i.e., demonstrates] that it exists' (92b15–16, my translation).

Hence, when Aristotle speaks of the kinds which have 'causes other than themselves,' he has in mind not just attributes but indeed any kind which is such that its existence is demonstrable. This of course fits with what we have seen is Aristotle's claim in *APo* II.2 and II.8, namely, that a kind which has a 'cause other than itself' is such that there is some cause of its being, i.e., some middle term through which one can demonstrate that it exists (see especially *APo* II.2 90a1–11). For example, as we have seen, in *APo* II.2 and II.8 Aristotle maintains that one can demonstrate that there is an eclipse, i.e., explain why an eclipse (a certain kind of loss of light from the moon) occurs, by specifying its cause, viz., the obstruction of the Earth. Moreover, though all of Aristotle's examples in *APo* II.2 and II.8 are examples of attribute-kinds, in *Metaph.* VII.17 he applies the same idea to subject-kinds, using as his examples the kind *house* and the kind *human being*:

One is particularly liable not to recognize what is being sought in things not predicated one of another, as when it is asked what a man is [i.e., what is the essence of a human being], because the question is simply put and does not distinguish these things as being that. But we must articulate our question before we ask it...And since the existence of the thing must already be given, it is clear that the question must be why the matter is so-and-so. For instance, the question may be 'Why are these things here a house?' (and the answer is 'Because what being is for a house [i.e., the essence of a house] belongs to them'), or it may be 'Why is this thing here a man?', or 'Why is this body in this state a man?' So what is sought is the cause by which the matter is so-and-so, i.e., the form. (1041a32–b3, b4–b8, Bostock translation).²⁵

This brings me to a final point about kinds which have 'causes other than themselves.' In *APo* II.8, Aristotle gives two examples in which the identified cause is an *efficient* cause: an eclipse is essentially a loss of light from the moon due to, i.e., *efficiently caused by*, the obstruction of the Earth; thunder is essentially a noise due to, i.e., *efficiently caused by*, the quenching of fire in clouds. But elsewhere, when Aristotle brings to bear his four-cause explanatory framework, he indicates that he thinks that other types of causes can serve as 'the cause' of a kind. For example, again in *Metaph.* VII.17, Aristotle writes,

So what one asks is why it is that one thing belongs to another. (It must be evident that it does belong, otherwise nothing is being asked at all). Thus one may ask why it thunders, for this is to ask why a noise is produced in the clouds, and in this way what is sought is one thing predicated of another. And one may ask why these things here (e.g., bricks and stones) are a house. It is clear, then, that what is sought is the cause – and this is the what-being-is [i.e., the essence], to speak logically – which in some cases is that for the sake of which the thing exists (as presumably in the case of a house or a bed), while in some cases it is that which first began the change; for this latter is also a cause. (1041a23–a30, Bostock translation).

Here Aristotle implies that in the case of some kinds (e.g., in the case of the kind *house* or the kind *bed*) the cause sought is a *final cause*, whereas in other cases (e.g., the case of the kind *eclipse* or the kind *thunder*) the cause sought is an *efficient* cause. For example, while thunder is essentially a noise due to, i.e., efficiently

²⁵ For other texts in which Aristotle describes the form of a substance as a 'cause of its being,' see *Metaph.* V.8 1017b14–16, *DA* II.4 415b12–13, and *Metaph.* H.2 1043a2–7.

caused by, the quenching of fire in clouds, a house is essentially bricks and stones (or some durable stuff) arranged for the sake of sheltering people and possessions (see *Metaph.* H.2 1043a14–19 for a definition of house along these lines).

Much more could be said about how the account in *APo* II.2 and *APo* II.8 connects with Aristotle's four-cause explanatory framework or with what Aristotle says in *Metaph.* VII.17 and related passages, but I set aside such complications here.²⁶ Instead, what I wish to emphasize is that, whatever the types of causes invoked, the procedure described in *APo* II.2 and II.8 is one in which one 'makes clear' or comes to know the essence of a kind by identifying *the kind's cause* rather than the cause of the kind's having the in itself accidents that it does. In the case of attribute-kinds like eclipse or thunder, this means identifying why the attribute-kind, or rather instances of the attribute-kind, inhere in or characterize some subject, e.g., why the moon undergoes an eclipse (i.e., a certain kind of loss of light), why the clouds produce thunder (i.e., a certain kind of noise), etc. In the case of subject-kinds like human being or house, this means identifying what makes a subject (perhaps characterized as such and such matter) an instance of the kind, e.g., why these things (e.g., bricks and stones) are a house, why this thing is a human being, etc. (Here it may be helpful to note that for a subject-kind to exist just is for there to be instances of that kind, and hence to explain or demonstrate the existence of a subject-kind is just to explain why there are instances of that kind, i.e., what makes such and such things instances of that kind).²⁷ Crucially, in either case, this is a different claim than the one found in *DA* I.1, where Aristotle suggests that one can make clear or come to know the essence

²⁶ Another text relevant here is *APo* II.11, where Aristotle observes that there are four types of cause (94a21) and goes on to suggest, for example, that some kinds have a final cause, e.g., a house is for the sake of protecting people and their possessions (see 94b10–11). For one attempt to explain how Aristotle's discussion in *APo* II.2 and II.8 fits with his four-cause explanatory framework and with *Metaph.* VII.17 and related passages, see Charles 2000: ch.11 and Charles 2010. However, I note that because Charles understands *APo* II.2 and *APo* II.8 differently than I do, what he proposes is not quite what I would propose. Thus, for example, when discussing the example of a *house* mentioned in *Metaph.* VII.17, Charles takes Aristotle's claim to be that we can make clear the essence of a house by making clear the cause (in this case, a final cause) which explains why the matter of a house is arranged a certain way, viz., the matter is arranged this way for the sake of protecting goods and people (see Charles 2010: 310–312). Charles goes on to describe this claim as the claim that 'the (basic) essence...will be knowable in virtue of its being the specific final cause of the kind's possession of its other properties. As in *Analyt.* B.8–10, one can grasp something as a basic essence in virtue of seeing it as the fundamental cause' (314). Here Charles runs together what I have been arguing are two distinct ideas about essence: (1) the idea that the essence of a kind includes its cause and (2) the idea that the essence of a kind is explanatory of why it has certain other necessary features (e.g., its *in itself accidents*). In contrast with what Charles maintains, I maintain that Aristotle's claim in *Metaph.* VII.17 is that we can make clear the essence of a house by making clear *the cause (in this case, the final cause) of a house*, just as we can make clear the essence of thunder by making clear the cause (in this case, the efficient cause) of thunder. Of course, in accord with claim (2) about essence, the fact that houses are essentially for the sake of protecting people and their possessions is explanatory of why houses have certain other features, e.g., why houses are made of bricks and stones (or, more generally, durable stuff), just as the fact that eclipses are essentially caused by the interposition of the Earth between the sun and the moon explains why eclipses have certain other features, e.g., why eclipses recur periodically. But just as Aristotle does not say in *APo* II.2 and II.8 that we can make clear the essence of an eclipse by making clear why an eclipse has the other, *in itself* features that it does but rather that we can make clear the essence of an eclipse by identifying the cause of an eclipse, i.e., the cause of the moon's undergoing a certain kind of loss light (the kind of loss of light which just is an eclipse), which in this case is an *efficient* cause, likewise in *Metaph.* VII.17 Aristotle does not say that we can make clear the essence of a house by making clear why it has the other, *in itself* features that it does but rather that we can make clear the essence of a house by identifying the cause of a house, i.e., 'why these things here (e.g., bricks and stones) are a house,' which in this case is a *final* cause (see 1041a26–27, b5–6). This is not to say Aristotle does not think the essence of a house is explanatory of why houses have certain other, *in itself* features but only that, as in *APo* II.2 and II.8, in *Metaph.* VII.17 this is not the thesis about essence with which Aristotle is primarily concerned.

²⁷ Against this, one might raise the following worry: doesn't Aristotle suggest in *Metaph.* VII.17 that inquiring into why a member of a kind is of that kind is 'like inquiring into nothing at all?' (see 1041a14–22). In response, I note that the chapter suggests that asking 'why is a K a K?' is like inquiring into nothing at all, not that asking 'why is this sort of thing a K?' is like inquiring into nothing at all. Indeed, the chapter seems to raise questions of just this form, e.g., 'Why are these things here a house?' or 'Why is this thing here a human being?' (see 1041b5–7).

Now one can press whether this really is a case of asking why something is a member of a kind on the grounds that Aristotle seems to think the question really is 'why is such and such matter a K?' (see 1041b5, b7–8). Some authors (e.g., Bostock 1994: 244) claim that the matter in question is not itself a member of the kind but rather only the matter of a member of the kind. But I'm inclined to disagree with this idea. The question 'Why is S a K?' presupposes that S is a K. For example, the question 'Why are these things here a house?' presupposes that these things are a house, and the question 'Why is this thing here a human being?' presupposes that this thing here is a human being. In fact, Aristotle himself makes this point when he notes that 'the existence of the thing must already be given' (1041b4–5): if we ask 'Why is S a K?', it must already be given that S is a K; indeed, earlier Aristotle says if we ask why K belongs to S, 'it must be evident that it does belong' (see 1041a23). Hence, contrary to what some authors (e.g., Bostock 1994: 244) suggest, whatever 'S' refers to, it is something which can be aptly characterized as 'a K', i.e., an instance of the kind K. (I note that this claim is compatible with it being the case that S is not actually a K except insofar as *what-being-is-for-a-K* belongs to S). I thank one of the anonymous referees for encouraging me to address this issue.

of a kind not by identifying the cause of the kind but rather by identifying the cause of the kind's in itself accidents, i.e., why the kind has such and such necessary but non-essential features.

§4. Combining the Two Ideas: An Enriched Explanationist Interpretation

In the preceding pages, I have argued that Aristotle makes two distinct non-epistemological claims about essence. On the one hand, Aristotle holds that the essential features of a kind can be distinguished from its non-essential but necessary features by virtue of the former's explanatory role: the essence E of a kind is not only a necessary feature of the kind but also such that (a) E does not belong to any instance of the kind in virtue of other features of the kind belonging to that instance and (b) at least some of the other necessary features of the kind (viz., its *in itself accidents*) belong to its instances (at least in part) because E belongs to those instances. On the other hand, Aristotle claims that in the case of kinds which have 'causes other than themselves,' the essence of a kind includes its cause.

Moreover, I have argued that each of these non-epistemological claims about essence opens the way for a distinct epistemological claim about essence, each of which can be found in evidence in Aristotle's texts. On the one hand, the idea that the essence of a kind is what explains why it has the *in itself accidents* that it does opens the way for the epistemological claim, discussed in *DA* I.1, that one can make clear what a kind's essence is by identifying what feature(s) of the kind explain why it has the *in itself accidents* that it does. On the other hand, the idea that, for some kinds, the essence of a kind includes its cause opens the way for the distinct epistemological claim, discussed in *APo* II.2 and II.8, that one can make clear what a kind's essence is by identifying the kind's cause.

At this point, one might well wonder how, if at all, these two distinct non-epistemological claims and corresponding epistemological claims fit together. In what follows, I suggest that the two strands can be unified in what I call an 'Enriched Explanationist Interpretation' of Aristotle's epistemology of essence.

Consider first the two non-epistemological claims about essence. Two important results follow from the combination of these claims. First, if a kind is such that it has a cause other than itself, then not only is the cause part of the kind's essence but also the fact that the kind's instances are caused in this way is an indemonstrable fact. Thus, for example, the fact that an eclipse is due to the obstruction of the Earth is an indemonstrable fact about eclipses; it is not the case that there are some other feature(s) of an eclipse such that the fact that an eclipse is due to the obstruction of the Earth can be explained by reference to these other features. Second, it also follows from the combination of the two theses that if a kind has a cause other than itself, then the fact that it has this cause plays a role in explaining why it has the other characteristic but non-essential features (i.e., the *in itself accidents*) that it does. Thus, for example, the fact that an eclipse is due to the obstruction of the Earth plays a role in explaining why an eclipse involves a circular black spot which gradually overtakes the whole surface of the moon. Likewise, the fact that thunder is due to the quenching of fire plays a role in explaining why thunder involves the booming sound that it does and why thunder is preceded by lightning.

The combination of the two non-epistemological claims about essence also has consequences for each of the aforementioned epistemological claims. On the one hand, the non-epistemological claim that the essence of a kind includes the kind's cause, if there is one, implies that the epistemological claim in *DA* I.1 can be expanded with the suggestion that one investigate whether the kind is such that its instances are all caused in a certain way and, if so, whether the fact that they are caused in that way can be used to explain why they have the *in itself accidents* that they do. Thus, for example, in the case of an eclipse, the suggestion is that, in looking to explain why eclipses have the *in itself accidents* that they do (e.g., why eclipses involve a circular black spot which gradually overtakes the whole surface of the moon), one consider what the cause of an eclipse is and whether the fact that an eclipse is caused in that way can be used to explain why eclipses have such features. On the other hand, the non-epistemological claim that the essence of a kind is explanatory of why the kind has the *in itself accidents* that it does implies that the epistemological claim in *APo* II.2 and II.8 can be supplemented by the idea that, in looking for the cause of a kind, one should look for something which can play a role in explaining why it has the *in itself accidents* that it does. Thus, for example, in looking to identify the cause of an eclipse, one must look for something which can explain why eclipses have the characteristic but non-essential features that they do. Indeed, the hypothesis that an eclipse is caused by the *obstruction of the Earth* rather than by, say, the rotation of the moon or the destruction of the moon (see *APo* II.8 93b5–6) is confirmed by the fact that, unlike the latter hypotheses, the former can explain why eclipses have the *in itself accidents* that they do, e.g., why an eclipse involves a circular black spot which gradually overtakes the whole surface of the moon and why an eclipse is something which recurs periodically.

In summary, the combination of Aristotle's two non-epistemological claims about essence provides the basis for what I call an 'Enriched Explanationist Interpretation' of Aristotle's epistemology of essence. The core insight of the Explanationist Interpretation is retained: one can identify what a kind's essence is by identifying what feature(s) of the kind explain why it has the *in itself accidents* that it does. However, Aristotle's additional non-epistemological thesis provides a way to develop the original Explanationist proposal. In looking to identify what feature(s) of a kind explain why it has the *in itself accidents* that it does, one should consider whether the kind has a cause other than itself, for if it does, then the cause is to be included in the essence which explains why it has the *in itself accidents* that it does. On the other hand, in looking to identify such a cause, one must attend to whether the proposed cause can play a role in explaining why the kind has the *in itself accidents* that it does. If it cannot, one has some evidence that one has misidentified the kind's cause, for the kind's cause must be something which would explain the occurrence of something which has those *in itself accidents*.

§5. Concluding Remarks: an Insight for Contemporary Essentialists

Before concluding, I wish to highlight an insight of the foregoing historical discussion which is relevant to the contemporary non-modal essentialist's task of explaining how it is that we can come to know what something's essence is. The core idea of the non-modal essentialist is that not all of the necessary properties of something need be included in its essence; to be part of something's essence involves more than just being a property which it necessarily has if it exists. But if one leaves one's non-modal essentialism at that, it seems that little can be said to explain how, in any given case, we could know which of a thing's necessary features are part of its essence and which are not. However, if one adds to one's non-modal essentialism some further non-epistemological claims about the explanatory role of essences or about which sorts of features in general are suitable for inclusion in the essence of something, then a more substantive answer to the epistemological question becomes possible. For such non-epistemological theses about what sorts of features are suitable to be part of the essences of things provide further marks which can be used to determine which of the necessary features of a thing are part of its essence and which are not. Hence, I suggest to the contemporary non-modal essentialist that if she wishes to take up the little-discussed question of how it is that we come to know what something's essence is, she should begin with a non-epistemological question: what exactly distinguishes a thing's essential features from its merely necessary features? The more that can be said here, the more that can be said in answer to the question of how we can come to know what the essences of things are.²⁸

Competing Interests

The author has no competing interests to declare.

References

- Barnes, J.** 2002/1993. *Aristotle: Posterior Analytics*. 2nd Edition. Oxford: Clarendon Press.
- Bolton, R.** 1987. Definition and scientific method in Aristotle's *Posterior Analytics* and *Generation of Animals*. In: Gotthelf, A and Lennox, J (eds.), *Philosophical Issues in Aristotle's Biology*, 120–166. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511552564.010>
- Bolton, R.** 1991. Aristotle's Method in Natural Science. In: Judson, L (ed.), *Aristotle's Physics*, 1–30. Oxford: Oxford University Press.
- Bolton, R.** 2017. The Search for Principles in Aristotle: *Posterior Analytics* 2 and *Generation of Animals* 1. In: Falcon, A and Lefebvre, D (eds.), *Aristotle's Generation of Animals: A Critical Guide*, 227–248. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/9781316459386.014>
- Bolton, R** and **Code, A.** 2012. Aristotle on Knowledge. In: Hetherington, S (ed.), *Epistemology: The Key Thinkers*, 50–71. New York: Continuum.
- Bostock, D.** 1994. *Aristotle: Metaphysics Books Z and H*. Oxford: Clarendon Press.
- Bronstein, D.** 2012. The Origin and Aim of *Posterior Analytics* II.19. *Phronesis*, 57(1): 29–62. <https://doi-org.proxy.libraries.rutgers.edu/10.1163/156852812X607289>. DOI: <https://doi.org/10.1163/156852812X607289>

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- Bronstein, D.** 2015. Essence, Necessity, and Demonstration in Aristotle. *Philosophy and Phenomenological Research*, 90(3): 724–732. DOI: <https://doi.org/10.1111/phpr.12184>
- Bronstein, D.** 2016. *Aristotle on Knowledge and Learning: The Posterior Analytics*. Oxford: Clarendon Press. DOI: <https://doi.org/10.1093/acprof:oso/9780198724902.001.0001>
- Charles, D.** 2000. *Aristotle on Meaning and Essence*. Oxford: Clarendon Press. DOI: <https://doi.org/10.1093/019925673X.001.0001>
- Charles, D.** 2010. Definition and Explanation in the *Posterior Analytics* and *Metaphysics*. In: Charles, D (ed.), *Definition in Greek Philosophy*, 286–328. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199564453.001.0001>
- Charles, D.** 2014. Aristotle: Definition, Explanation, and Essence. *Metascience*, 23(1): 16–24. DOI: <https://doi.org/10.1007/s11016-013-9815-1>
- Fine, K.** 1994. Essence and Modality. *Philosophical Perspectives*, 8: 1–16. DOI: <https://doi.org/10.2307/2214160>
- Frede, M.** 1996. Aristotle's Rationalism. In: Frede, M and Striker, G (eds.), *Rationality in Greek Thought*, 157–73. Oxford: Clarendon Press.
- Goldin, O.** 1996. *Explaining an Eclipse: Aristotle's Posterior Analytics 2.1–2.10*. Ann Arbor, MI: University of Michigan Press. DOI: <https://doi.org/10.3998/mpub.14794>
- Hale, B.** 2013. *Necessary Beings: An Essay on Ontology, Modality, and the Relations Between Them*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199669578.001.0001>
- Hasper, P** and **Yurdin, J.** 2014. Between Perception and Scientific Knowledge: Aristotle's Account of Experience. *Oxford Studies in Ancient Philosophy*, 47: 119–150. DOI: <https://doi.org/10.1093/acprof:oso/9780198722717.001.0001>
- Hauser, C.** Manuscript. Aristotle's Epistemology of Essence.
- Hicks, RD.** 1907. *Aristotle: De Anima*. Cambridge: Cambridge University Press.
- Irwin, TH.** 1980. The Metaphysical and Psychological Basis of Aristotle's Ethics. In: Rorty, A (ed.), *Essays on Aristotle's Ethics*, 35–53. Berkeley: University of California Press.
- Irwin, TH.** 1988. *Aristotle's First Principles*. Oxford: Clarendon Press. DOI: <https://doi.org/10.1093/0198242905.001.0001>
- Johansen, TK.** 2012. *The Powers of Aristotle's Soul*. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199658435.001.0001>
- Koslicki, K.** 2012. Essence, Necessity, and Explanation. In: Tahko, T (ed.), *Contemporary Aristotelian Metaphysics*, 187–20. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511732256.014>
- Kosman, LA.** 1973. Understanding, Explanation, and Insight in Aristotle's *Posterior Analytics*. In: Lee, EN, Mourelatos, APD and Rorty, RM (eds.), *Exegesis and Argument*, 374–92. Assen: Van Gorcum.
- Kung, J.** 1977. Aristotle on Essence and Explanation. *Philosophical Studies*, 31(6): 361–83. DOI: <https://doi.org/10.1007/BF01857029>
- Lennox, J.** 1987. Divide and explain: The *Posterior Analytics* in practice. In: Gotthelf, A and Lennox, J (eds.), *Philosophical Issues in Aristotle's Biology*, 90–119. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511552564.009>
- Lennox, J.** 2001. *Aristotle: On the Parts of Animals I–IV*. Oxford: Clarendon Press.
- Loux, M.** 1991. *Primary Ousia: An Essay on Aristotle's Metaphysics Z and H*. Ithaca: Cornell University Press.
- Lowe, EJ.** 2008a. Two Notions of Being: Entity and Essence. *Royal Institute of Philosophy Supplements*, 83(62): 23–48. DOI: <https://doi.org/10.1017/S1358246108000568>
- Lowe, EJ.** 2008b. Essentialism, Metaphysical Realism, and the Errors of Conceptualism. *Philosophia Scientiae*, 12(1): 9–33. DOI: <https://doi.org/10.4000/philosophiascientiae.222>
- Lowe, EJ.** 2012. What is the Source of our Knowledge of Modal Truths. *Mind*, 121(484): 919–950. DOI: <https://doi.org/10.1093/mind/fzs122>
- Malink, M.** 2013. *Aristotle's Modal Syllogistic*. Cambridge, MA: Harvard University Press. DOI: <https://doi.org/10.4159/harvard.9780674726352>
- McKirahan, R.** 1992. *Principles and Proofs: Aristotle's Theory of Demonstrative Science*. Princeton: Princeton University Press.
- Oderberg, D.** 2007. *Real Essentialism*. New York: Routledge. DOI: <https://doi.org/10.4324/9780203356753>
- Ross, WD.** 1949. *Aristotle's Prior and Posterior Analytics*. Oxford: Clarendon Press.
- Ross, WD.** 1956. *Aristotelis De Anima*. Oxford: Clarendon.

- Ross, WD.** 1964. *Aristotelis Analytica Priora et Posteriora*. Oxford: Clarendon.
- Shields, C.** 2014. *Aristotle*. 2nd Edition. Routledge: New York. DOI: <https://doi.org/10.4324/9781315863580>
- Shields, C.** 2016. *Aristotle: De Anima*. Oxford: Clarendon Press.
- Tahko, T.** 2017. Empirically-Informed Modal Rationalism. In: Fischer, B and Leon, F (eds.), *Modal Epistemology After Rationalism*, 29–45. Cham, Switzerland: Springer. DOI: https://doi.org/10.1007/978-3-319-44309-6_3
- Tahko, T.** 2018. The Epistemology of Essence. In: Carruth, A, Gibb, SC and Heil, J (eds.), *Ontology, Modality, Mind: Themes from the Metaphysics of E.J. Lowe*, 93–110. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/oso/9780198796299.003.0007>
- Williams, S and Charles, D.** 2013. Essence, Modality, and the Master Craftsman. In: Feser, E (ed.), *Aristotle on Method and Metaphysics*, 121–145. New York: Palgrave Macmillan. DOI: <https://doi.org/10.1057/9781137367907>

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